

DYNAMIC INTERNET GATEWAY SERVICE

ABSTRACT

The present invention provides for a local network comprising a plurality of
5 interconnected computing devices that dynamically assigns a new Internet gateway server for the
local network when the currently assigned Internet gateway is not connected to the local network
and the Internet. Each one of the computing devices capable of connecting to the Internet is
given a different connection priority, which indicates the desirability of assigning the respective
computing device as the Internet gateway server. When a computing device in the local network
10 is unable to access the Internet through the currently assigned Internet gateway server, the
computing device broadcasts a message to the entire local network requesting to become the new
Internet gateway server. The request to become the gateway includes the connection priority of
the computing device. Each computing device on the local network capable of connecting to the
ISP responds to each request to become the gateway having a lower connection priority by
broadcasting its own request to become the gateway. The computing device having the highest
connection priority in the local network receives no response from the other computing devices
to its requests to become the gateway. When this occurs, the computing device having the
highest connection priority assigns itself as the new Internet gateway for the local network.